



# UNITED STATES PATENT AND TRADEMARK OFFICE

CT

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,216	11/12/2003	Fei Luo	BEAS-1339US3	6317
23910	7590	07/25/2006	EXAMINER	
FLIESLER MEYER, LLP FOUR EMBARCADERO CENTER SUITE 400 SAN FRANCISCO, CA 94111			ZHEN, LI B	
			ART UNIT	PAPER NUMBER
			2194	

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/706,216	Applicant(s) LUO ET AL.	
	Examiner Li B. Zhen	Art Unit 2194	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/12/04;4/21/06</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1 – 16 are pending in the application.

#### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 11/12/2004 and 4/21/2006 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements were considered by the examiner.

#### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
4. The applicant recites a number of references by the attorney docket numbers [p. 2, paragraphs 004 and 005; p. 11, paragraph 025]. Please update the docket numbers into U.S. application serial numbers.

#### ***Claim Objections***

5. Claims 3, 8 and 9 are objected to because of the following informalities:
  - a. Claim 3, the abbreviations (JDBC, JMS) should be defined;
  - b. Claim 8, line 1, the limitation "object to the an application program" contains grammatical error; and
  - c. Claim 9, the abbreviation (J2EE) should be defined.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 1 recites the limitation "the vendor class" in line 2. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 9 recites the limitation "the standard extensions" in line 1. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 101***

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claimed invention as a whole must be useful and accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-

02. Examiner suggests that claim 1 does not appear to a "useful, concrete and tangible

result". The result of claim 1 is "associating the vendor object with the wrapper object" [line 7] and forming an association between the vendor object and the wrapper object does not appear to necessarily be producing a tangible result. The term "association" is very broad and can be interpreted to define a conceptual relationship. The forming of a conceptual relationship between two objects does not produce a tangible result; therefore, claim 1 is directed to non-statutory subject matter.

### ***Double Patenting***

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claims 1-9 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 10/706515 [hereinafter APP515]. Although the conflicting claims are not identical,

Art Unit: 2194

they are not patentably distinct from each other because APP515 is directed to the same invention for dynamically generating a wrapper object.

As to claim 1, APP515 discloses dynamically generating a wrapper object comprising:

receiving a vendor class and superclass [claim 1, line 4 of APP515], performing reflection on the class [claim 1, line 5 of APP515], generating a wrapper class [claim 1, line 8 of APP515], instantiating the wrapper class including generating a wrapper object as an instance of the wrapper class [claim 1, lines 10-12 of APP515]; associating the vendor object with the wrapper object [claim 1, lines 11-12 of APP515]. Although the current application recites receiving a vendor object while APP515 recites receiving a vendor class, a vendor object is an instantiation of a vendor class. It would have been obvious to a person of ordinary skill in the art at the time the invention was made that the vendor class of APP515 would be instantiated to create a vendor object because instantiation of the vendor class allows other objects to use the functions implemented by the vendor object. In addition, APP515 recites a machine-readable medium carrying instructions for performing the method of claim 1 of the current application. It would have been obvious to a person of ordinary skilled in the art at the time the invention was made that execution of the instruction stored on the machine readable-medium of APP515 by a computer performs the claimed method of the current application.

As to claims 2-9, these claims correspond to claims 2-9 of APP515.

Art Unit: 2194

14. Claims 10-16 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 10, 13 and 16 of copending Application No. 10/706515 in view of U.S. Patent Application Publication No. 2004/0143835 to Dattke.

As to claim 10, APP515 discloses receiving an invocation call by a wrapper object, the invocation call directed to a wrapped vendor object by an application program [claim 10, lines 5-6 of APP515], initiating pre-processing by the wrapper object [claim 10, lines 7-8 of APP515], calling the wrapped vendor object by the wrapper object [claim 10, line 9 of APP515], receiving a result from the wrapped vendor object by the wrapper object [claim 10, line 10 of APP515], initiating post-processing [claim 10, line 11 of APP515], provide the result to the application program [claim 10, line 13 of APP515]. APP515 does not recite initiating post-processing by the wrapper object.

However, Dattke teaches a wrapper object initiating post-processing [pp. 3-4, paragraph 0036].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine APP515 with Dattke because Dattke's teachings provides a dedicated handler for receiving results from extension methods [p. 2, paragraph 0022 of Dattke] and allows the results from the extension methods to be combined and returned to the standard application [p. 3, paragraph 0034 of Dattke].

As to claim 11-6, these claims correspond to claims 10, 13 and 16 of APP515.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**16. Claims 1-7 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,993,774 to Glass.**

17. As to claim 1, Glass teaches a method for dynamically generating a wrapper object [dynamic generation of remote proxies; col. 6, lines 40 – 55], comprising:

receiving a vendor object [reads the associated class 252 from a class repository, col. 18, lines 56 – 63, see Fig. 11, element 252 can be either class or object; Glass also discloses locating the subject object, step 26, Fig. 2, col. 7, lines 19 - 35; Examiner notes that the specification does not specifically define a vendor object, therefore a vendor object is given its plain meaning and is interpreted as object that provides services to other applications. The subject object as disclosed in Glass exists on a server system and provides services to clients, see col. 8, lines 1 – 12. Therefore, the subject object as disclosed in Glass corresponds to the recited vendor object.] and

Art Unit: 2194

superclass [determine each of subject class 19 superclasses...storage area for the name, superclasses; col. 8, lines 29 – 41];

performing reflection on the vendor class [invokes reflection engine 36 to determine information regarding subject class 19; col. 8, lines 1 – 12];

generating a wrapper class [generate the byte codes that define the class of subject object 18, col. 6, line 55 – col. 7, line 6; remote proxy for the subject object will inherit all of the variables and methods of its ancestors; col. 7, lines 58 – 67];

instantiating the wrapper class [col. 11, lines 3 – 13], the instantiating including generating a wrapper object as an instance of the wrapper class [class loader 46 takes the generated bytes of remote proxy class 23 stored in memory and loads them into a class structure which then can be instantiated to create remote proxy object 22; col. 10, lines 1 – 10];

and associating the vendor object with the wrapper object [generated interface is associated with subject class 19; col. 8, lines 40 – 48].

18. As to claim 2, Glass teaches, the wrapper object is dynamically generated at runtime [col. 6, lines 40 – 55].

19. As to claim 3, Glass teaches the superclass is one of a pre-existing JDBC, JMS, or connector class [superclass remote proxies; col. 7, lines 56 – 67; examiner notes that the superclass remote proxy is a proxy that allows communications between a client and server object, therefore, the superclass remote proxies are also connector classes].

20. As to claim 4, Glass teaches the superclass includes logic to handle server side tasks [forwards the message to the appropriate EJB function object 206 for preliminary processing; col. 15, lines 38 – 56].

21. As to claim 5, Glass teaches the wrapper class is generated in bytecode [byte codes representing remote proxy class 23 are generated; col. 7, lines 20 – 35].

22. As to claim 6, Glass teaches bytecode is generated for vendor methods [byte codes representing remote proxy class 23 are generated; col. 7, lines 20 – 35] not implemented in the superclass [superclass remote proxies; col. 7, lines 56 – 67; examiner notes that the superclass remote proxies include all of the variables and methods of the subject class' ancestors, therefore, the subject class would include methods that are not implemented in the superclass].

23. As to claim 7, Glass teaches the bytecode is generated using hot code generation [byte code generator 42 takes general information regarding the needed Java object and directly generates executable Java code without the need for the intermediate step of creating a Java source file, col. 9, lines 27 – 50; generated class functionality placed in specialized function objects referred to as EJB function objects, col. 15, lines 1 – 17].

Art Unit: 2194

24. As to claim 9, Glass teaches the standard extensions [remote proxy 154 is generated from a standard base proxy class...allow remote proxy 154 to inherit methods and functionality from server object 110; col. 12, lines 55 – col. 13, line 18] are J2EE extensions [Enterprise Java Beans, col. 15, lines 1 – 16; Enterprise JavaBeans technology is the server-side component architecture for Java Platform, Enterprise Edition (Java EE)].

***Claim Rejections - 35 USC § 103***

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2194

**27. Claims 8 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glass in view of U.S. Patent Application Publication No. 2004/0143835 to Dattke et al. [hereinafter Dattke].**

28. As to claim 10, Glass teaches the invention substantially as claimed including a method for processing an invocation [col. 11, line 60 – col. 12, line 5] using a dynamically generated wrapper [dynamic generation of remote proxies; col. 6, lines 40 – 55], comprising:

receiving an invocation call by a wrapper object [In order to isolate the distributed processing communication requirements from local object 20, a remote proxy object 22 may be created on server system 12 and loaded onto client system 14; col. 5, line 52 – col. 6, line 7], the invocation call directed to a wrapped vendor object by an application program [Local object 20 may request access to subject object 18; col. 5, line 52 – col. 6, line 7];

initiating pre-processing by the wrapper object [Type object 204 forwards the message to the appropriate EJB function object 206 for preliminary processing; col. 15, lines 38 – 56; col. 13, line 57 – col. 14, line 15];

calling the wrapped vendor object by the wrapper object [Local object 20 communicates with remote proxy object 22 which then communicates with subject object 18; col. 5, line 52 – col. 6, line 7];

receiving a result from the wrapped vendor object by the wrapper object  
[Reference object 158 decodes the result and passes it to remote proxy 154; col. 13, lines 40 – 58];

initiating post-processing [Set of streamers 180 handles the encoding and transmission...results; col. 14, lines 13 – 31 and col. 15, lines 56 – 67; Client-side ORB 112 locates the appropriate reference object 158 utilizing communication protocol information received with the result message, col. 15, lines 1- 16]; and

provide the result to the application program [Remote proxy 154 then makes the result available to client application 108; col. 13, lines 40 – 58].

Although Glass teaches the invention substantially, Glass does not specifically disclose initiating post-processing by the wrapper object.

However, Dattke teaches an application extension runtime environment for vendor objects [an application extension runtime environment 100 for standard applications; pp. 2-3, paragraph 0031], generating a wrapper object as an instance of the wrapper class by instantiating the wrapper class [p. 3, paragraph 0035], receiving an invocation call by a wrapper object [calls a method of the extension object through the dynamic proxy (step 420); p. 3, paragraph 0035], receiving a result from the wrapped vendor object [dynamic proxy determines the result of calling the method of the extension object; p. 3, paragraph 0035], and the wrapper object initiating post-processing [dynamic proxy for the extension object requests the result handler to evaluate the results obtained from the extension object implementations (step 540), and the results are determined (step 545); pp. 3-4, paragraph 0036].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Glass with Dattke because Dattke's teachings provides a dedicated handler for receiving results from extension methods [p. 2, paragraph 0022 of Dattke] and allows the results from the extension methods to be combined and returned to the standard application [p. 3, paragraph 0034 of Dattke]. Since the extension methods are added to a standard application at a later time, the standard application would not know how to handle results from the extension methods. The result handler allows results from extension methods to be properly handled and returned to the standard application.

29. As to claim 8, Glass teaches providing the wrapper object [dynamic generation of remote proxies; col. 6, lines 40 – 55] to an application program [loads remote proxy class 23 onto client system 14; col. 11, lines 4 – 13], allowing the application program to access [Communications between client application 108 and server object 110 proceed by client application 108 communicating with remote proxy 154 through its interface IProxy 152; col. 13, lines 25 – 40] standard features [remote proxy 154 is generated from a standard base proxy class...allow remote proxy 154 to inherit methods and functionality from server object 110; col. 12, lines 55 – col. 13, line 18].

Although Glass teaches the invention substantially, Glass does not specifically teach a wrapper object providing access to non-standard vendor extensions.

However, Dattke teaches an application extension runtime environment for vendor objects [an application extension runtime environment 100 for standard

applications; pp. 2-3, paragraph 0031], generating a wrapper class [dynamic proxy] comprising at least one of vendor specific extension methods [extension object] from the vendor [standard application; p. 4, paragraph 0038] class [generate a dynamic proxy for the an extension object implemented by the application extension; pp. 2-3, paragraph 0031], generating a wrapper object as an instance of the wrapper class by instantiating the wrapper class [p. 3, paragraph 0035], a wrapper object providing access to non-standard vendor extensions [the extension factory generates a dynamic proxy for the extension object (step 410) and returns the dynamic proxy to the method of the standard application requesting the extension object (step 415). The method of the standard application calls a method of the extension object through the dynamic proxy; p. 3, paragraph 0035].

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to combine Glass with Dattke because Dattke's teachings allows dynamic proxy objects to provide extensions to standard applications [p. 1, paragraph 0005 of Dattke] and permits standard applications to be modified as part of a future release without requiring any specific modifications to support existing application extension [p. 2, paragraph 0023 of Dattke]. Dynamic proxy classes can be used to create a type-safe proxy object for a list of interfaces without requiring pre-generation of the class prior to compilation [p. 1, paragraph 0005 of Dattke] and provides the advantage of allowing customers of the standard application to customize the features of the standard application by providing customer-specific extensions for the features implemented by the standard application [p. 1, paragraph 0002 of Dattke].

30. As to claim 11, Glass teaches the pre-processing including calling a pre-invocation handler [EJB function object 206 for preliminary processing; col. 15, lines 38 – 56].

31. As to claim 12, Glass teaches the pre-invocation handler is configured to execute server-side code [Type object 204 forwards the message to the appropriate EJB function object 206 for preliminary processing; col. 15, lines 38 – 56].

32. As to claim 13, Glass teaches the server-side code includes global transaction processing code [Preliminary common processing may include...transaction management; col. 15, lines 38 – 57].

33. As to claim 14, Glass teaches post-processing including calling a post-invocation handler [Set of streamers 180 handles the encoding and transmission; col. 14, lines 13 – 31 and col. 15, lines 56 – 67; col. 15, lines 1- 16].

34. As to claim 15, Glass teaches the post-invocation handler is configured to perform post-processing server side tasks [Set of streamers 180 handles the encoding and transmission...results; col. 14, lines 13 – 31 and col. 15, lines 56 – 67; Client-side ORB 112 locates the appropriate reference object 158 utilizing communication protocol information received with the result message, col. 15, lines 1- 16].

35. As to claim 16, Glass teaches the post-processing server-side tasks include global transaction management [generated class functionality may include...transaction management; col. 15, lines 1 – 16].

### ***Conclusion***

36. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6578191 to Boehme discloses a method for dynamic "event to method" adapter class generation.

U.S. Patent Application Publication No. 20020152210 to Johnson discloses a system for providing access to a plurality of disparate content repositories comprising a client application program interface.

U.S. Patent Application Publication No. 20030105883 to Gibbons discloses a method for allowing Java objects to communicate with .Net Remoting objects.

### **CONTACT INFORMATION**

37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on 571-272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LBZ

Li B. Zhen  
Examiner  
Art Unit 2194

A handwritten signature in black ink, appearing to be 'Li B. Zhen', written in a cursive style.